

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-26 are pending in the application, with claims 1, 9, and 15 being the independent claims. Claim 23 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein. New claims 25 and 26 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 112

The Examiner has rejected claims 15-24 under 35 U.S.C. § 112, second paragraph, as being indefinite. In light of the above amendment to claim 15, Applicant respectfully submits that the Examiner's rejection of claims 15-24 under 35 U.S.C. § 112, second paragraph has been traversed, and Applicant respectfully requests that the rejection be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-7

The Examiner has rejected claims 1-7 under 35 U.S.C. § 103(a) as being obvious over Gun Seo et al., "An Implementation of VoIP Cable Modem" ("Seo") in view of U.S. Patent No. 6,075,784 to Frankel et al. ("Frankel").

Independent claim 1, as amended, recites "a telephony system." The recited telephony system of claim 1 includes:

a first voice processing module;

a second voice processing module;

a host processor coupled to said first and second voice processing modules; and

a buffer coupled to said first voice processing module, said second voice processing module, and said host processor;

wherein said first voice processing module is adapted to receive first digital voice signals from any one of a first plurality of subscriber lines, to compress said first digital voice signals to generate a first voice packet, and to transfer said first voice packet to said buffer by performing a first DMA transfer;

wherein said second voice processing module is adapted to receive second digital voice signals from any one of a second plurality of subscriber lines, to compress said second digital voice signals to generate a second voice packet, and to transfer said second voice packet to said buffer by performing a second DMA transfer; and

wherein said host processor is adapted to assemble a packet comprising said first voice packet and said second voice packet and to transmit said assembled packet for delivery over a data network.

The Examiner, in rejecting claims 1-7, states that the wording "adapted to" indicates that the limitation is optional according to MPEP Chapter 2106 II C. See Office Action, p. 2. Applicant has reviewed the cited section, as well as other relevant sections such as MPEP 2111.04, and respectfully disagrees with the Examiner's interpretation of the MPEP rules with regards to the language "adapted to." Accordingly, Applicant respectfully submits that the features of claim 1 containing the language "adapted to" merit consideration during an analysis of claim 1.

Claim 1 has been amended to include elements of the former claim 23 (now canceled). In formulating a rejection for claim 23, the Examiner relied on the combination of Seo and Frankel, and further on U.S. Patent No. 6,304,567 to Rosenberg ("Rosenberg") and U.S. Patent No. 6,088,745 to Bertagna et al. ("Bertagna"). The Examiner concedes, and Applicant agrees, that the combination of Seo, Frankel, and Rosenberg fails to teach or suggest "performing a first DMA transfer" and "performing a second DMA transfer." The Examiner relies on Bertagna to supply the teaching or suggestion of the above missing feature.

Bertagna is directed to a direct memory access ("DMA") transfer system which allocates contiguous address spaces tailored to fit packets being buffered. *See* Bertagna, col. 2, ll. 16-18. Bertagna nowhere teaches or suggests the use of a DMA transfer of a voice packet. In view of the foregoing, Applicant respectfully submits that the combination of Seo, Frankel, Rosenberg, and Bertagna does not teach or suggest each and every limitation of independent claim 1.

Furthermore, one of ordinary skill in the art would not be motivated to combine the communication systems of Seo, Frankel, and Rosenberg with the data memory transfer system of Bertagna as these references are directed to solving very different problems using very different technology.

For example, the architecture in Seo relies on processor-based memory transfer and contains no discussion of the benefits realized through the use of DMA transfer of voice packets. *See* Seo, Fig. 3, p. 1533 generally. Frankel similarly relies on processor-based memory transfer, using a "static random access memory (SRAM) 130" which is coupled to a controller "for buffering working data." *See* Frankel, col. 6, ll. 52-54; Fig.

2. Rosenberg also appears to rely on a processor-based memory transfer system, with a buffer coupled to a digital signal processor and a network controller for storing and reading digitized voice signals. *See* Rosenberg, col. 4, ll. 19-52; Fig. 2. The only suggestion of DMA transfer in the referenced art is contained in Bertagna, which clearly nowhere teaches or suggests the use of DMA in a telephony system for the transfer of voice packets.

Accordingly, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) is traversed, and Applicant respectfully requests that the rejection be withdrawn. Furthermore, dependent claims 2-7 are also not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 1 from which they depend, and further in view of their own respective features. Accordingly, the Examiner's rejection of claims 2-7 under 35 U.S.C. § 103(a) is also traversed and Applicant respectfully requests that the rejection be withdrawn.

Claim 8

The Examiner has rejected claim 8 under 35 U.S.C. § 103(a) as being obvious over Seo in view of Frankel and further in view of Rosenberg. Dependent claim 8 is not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 1 from which it depends, and further in view of its own respective features. Accordingly, the Examiner's rejection of claim 8 under 35 U.S.C. § 103(a) is traversed and Applicant respectfully requests that the rejection be withdrawn.

Claims 9-13

The Examiner has rejected claims 9-13 under 35 U.S.C. § 103(a) as being obvious over Seo in view of Frankel. Independent claim 9 has been amended to include "performing a first DMA transfer" and "performing a second DMA transfer." These features are not taught or suggested by Seo, Frankel, Rosenberg, or Bertagna for the same reasons set forth above with respect to claim 1. Accordingly, the rejection is traversed, and Applicant respectfully requests that the rejection be withdrawn. Furthermore, dependent claims 10-13 are also not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 9 from which they depend, and further in view of their own respective features. Accordingly, the Examiner's rejection of claims 10-13 under 35 U.S.C. § 103(a) is also traversed and Applicant respectfully requests that the rejection be withdrawn.

Furthermore, the Examiner, in rejecting claims 9-13, states that the wording "adapted to" indicates that the limitation is optional according to MPEP Chapter 2106 II C. *See Office Action*, p. 2. Applicant has reviewed the cited section, as well as other relevant sections such as MPEP 2111.04, and respectfully disagrees with the Examiner's interpretation of the MPEP rules with regards to the language "adapted to." Accordingly, Applicant respectfully submits that the features of claim 9 containing the language "adapted to" merit consideration during an analysis of claim 9.

Claim 14

The Examiner has rejected claim 14 under 35 U.S.C. § 103(a) as being obvious over Seo in view of Frankel and further in view of Rosenberg. Dependent claim 14 is

not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 9 from which it depends, and further in view of its own respective features. Accordingly, the Examiner's rejection of claim 14 under 35 U.S.C. § 103(a) is traversed and Applicant respectfully requests that the rejection be withdrawn.

Claims 15-22

The Examiner has rejected claims 15-22 under 35 U.S.C. § 103(a) as being obvious over Seo in view of Frankel further in view of Rosenberg. Independent claim 15 has been amended to include "performing a first DMA transfer" and "performing a second DMA transfer." These features are not taught or suggested by Seo, Frankel, Rosenberg, or Bertagna for the same reasons set forth above with respect to claim 1. Accordingly, the rejection of claim 15 is traversed, and Applicant respectfully requests that the rejection be withdrawn. Furthermore, dependent claims 16-22 are also not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 15 from which they depend, and further in view of their own respective features. Accordingly, the Examiner's rejection of claims 16-22 under 35 U.S.C. § 103(a) is also traversed and Applicant respectfully requests that the rejection be withdrawn.

Claim 24

The Examiner has rejected claim 24 under 35 U.S.C. § 103(a) as being obvious over Seo in view of Frankel, in view of Rosenberg, and further in view of Bertagna. Dependent claim 24 is not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna

for at least the same reasons as independent claim 15 from which it depends, and further in view of its own respective features. Accordingly, the Examiner's rejection of claim 24 under 35 U.S.C. § 103(a) is traversed and Applicant respectfully requests that the rejection be withdrawn.

Claims 25 and 26

New claims 25 and 26 have been added. Claim 25 is not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 1 from which it depends, and further in view of its own respective features. Claim 26 is not rendered obvious by Seo, Frankel, Rosenberg, and Bertagna for at least the same reasons as independent claim 9 from which it depends and further in view of its own respective features.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

Respectfully submitted,

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